I claim:

1. A method for producing a homogenous sample of a pressurized fluid stream flowing in a pipeline, the fluid stream consisting of a majority component of hydrocarbon gas, the remainder consisting of one or more hydrocarbon liquids and water in the form of vapor, aerosols, droplets and/or liquid streams, the method comprising:

a. injecting one or more surface active agents ("saa") into the fluid stream in an injection zone at a rate that is sufficient to form a uniform foam of the gas and the one or more hydrocarbon liquids and water components;

b. mixing the one or more saa with the fluid stream in a mixing zone to form a uniform foam composition flowing in the pipeline downstream of the mixing zone;

c. withdrawing a portion of the foam composition from the pipeline at a sampling point;

d. passing the portion of the foam composition withdrawn through a sampling loop; and

e. removing a sample of predetermined volume of the foam composition from the sampling loop for analysis.

2. The method of claim 1, wherein the mixing zone includes mixing means selected from the group consisting of in-line static mixers, injection jets,

derivatives; dodecylbenzene sulfonic acid; perfluoro compounds; perfluorooctanylbutane sulfonate; and mixtures of these compounds.

13. The method of claim 1, wherein the pressure and temperature of the foam composition in the sampling loop and the pipeline are substantially the same.

14. The method of claim 4, wherein the pressure of the foam composition in the sample container at the time of filling the container is the same as the pressure in the sampling loop.

15. The method of claim 1 where the injection and mixing zones are the same.

16. A method of creating homogeneous gas-liquid mixtures for sampling, comprising the steps of:

injecting a foaming agent into a stream of a gas-liquid mixture; and

processing the gas-liquid mixture with the foaming agent to induce foaming upstream of a sampling position.

17. The method of claim 16, wherein the foaming agent is a surfactant.

18. The method of claim 16, wherein the foaming agent includes a component for creating caustic conditions.

19. The method of claim 16, wherein the induced foaming results in a substantially homogenous fluid stream at the sampling position, said method further comprising the step of sampling the substantially homogeneous fluid stream at the sampling position.

20. The method of claim 19, wherein said sampling step produces a sample used for determining the value of the gas-liquid mixture at a custody transfer point.

21. The method of claim 19, wherein the stream of gas-liquid mixture is received from a well head, and wherein said sampling step produces a sample used for determining the composition of the stream of gas-liquid mixture at the well head.

22. The method of claim 16, wherein said processing step includes mixing the foaming agent with the gas-liquid mixture.

23. The method of claim 19, wherein the sampling step includes passing the homogeneous foam composition through a flow meter.

24. The method of claim 19, which includes the step of transporting the homogeneous foam fluid stream through a transmission pipeline.